## ABSTRACT

A new method is provided for monitoring the effect of electron charging during the creation of a semiconductor device. The method of the invention makes use of electron trapping that occurs as a result of FN tunneling in a layer of interlayer oxide of an EEPROM device. The electron trapping is monitored under conditions of processing. After the electron trapping has occurred, the rate of discharge of the trapped electron charge is measured during Wafer Acceptance Testing (WAT).